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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,474	01/18/2002	Sundeeep Chandhoke	5150-54200	2749
35690	7590	07/22/2005	EXAMINER	
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C. P.O. BOX 398 AUSTIN, TX 78767-0398			PILLAI, NAMITHA	
			ART UNIT	PAPER NUMBER
			2173	

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/051,474

Applicant(s)

CHANDHOKE ET AL.

Examiner

Namitha Pillai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-7, 10-25 and 27-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, 10-25 and 27-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/21/02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

RD

DETAILED ACTION

Response to Amendment

1. The Examiner acknowledges Applicant's submission on 7/7/05, wherein amendments have been made to claims 1, 6, 10, 13, 21, 23, 29, 32, 35, 42 and 44, and claims 4, 8, 9 and 26 have been cancelled. In addition, claims 45-48 have been newly added. All pending claims have been rejected as being previously disclosed or obvious over the prior arts. The information disclosure statement submitted on 10/21/00, wherein the Examiner has, now considered cited art that was not previously considered:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5-7, 10-13, 15-21, 23-25 and 27-44 rejected under 35 U.S.C. 102(b) as being clearly anticipated by "Compumotor, Motion Builder Start-Up Guide & Tutorial", herein referred to as Compumotor.

Referring to claims 1, 35 and 44, Compumotor discloses a computer-implemented method for creating a motion control sequence (page 2, lines 2-5). Compumotor discloses displaying a graphical user interface that provides graphical user interface access to a set of motion control operations and receiving user input to the graphical user interface specifying the sequence of motion control operations (page 1, lines 2-9). Compumotor discloses automatically generating a graphical program implementing the specified sequence of motion control

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operations (page 87), wherein it is clear that the sequence of motions created represents a program that is automatically generated representing the motion functions, the user specifies a sequence but the icons represent functions and other program features such as if-then statement, wherein with user manipulation a graphical program is automatically generated. Compumotor also discloses performing the specified sequence of motion control operations (page 8, lines 6-8).

Referring to claims 2 and 36, Compumotor discloses storing information representing the specified sequence of motion control operations in a data structure in response to said receiving user input specifying the sequence of motion control operations (page 6, lines 5-6), wherein the flowchart would represent a data structure.

Referring to claims 3, 30 and 37, Compumotor discloses that the information does not comprise programming language code (page 6, lines 1-3), wherein the information is represented as icons and not programming language code.

Referring to claims 5 and 39, Compumotor discloses receiving user input to the graphical user interface specifying parameter values for one or more motion control operations in the sequence (page 6, lines 7-8). Compumotor also discloses storing the parameter values and executing software routines corresponding to motion control operations in the sequence (page 8, lines 19-25), wherein the parameter information is stored in the program files. Compumotor also discloses passing the parameter values to the software routines for execution (page 80, lines 11-16), wherein this example discloses how parameters are stored and used for functions during execution.

Referring to claims 6 and 40, Compumotor discloses specifying a sequence of motion control operations does not include receiving user input specifying programming language code

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to implement the sequence of motion control operations (page 2, lines 2-5), wherein user input specifies icons and not programming language code.

Referring to claim 7, Compumotor discloses that the motion control sequence is operable to control motion of a device (page 69, line 24).

Referring to claim 10, Compumotor discloses creating program instructions executable to perform the specified sequence of motion control operations and performing the specified sequence of motion control operations comprises executing the program instructions (page 8, lines 6-8 and lines 22-25).

Referring to claim 11, Compumotor discloses receiving user input to the graphical user interface for configuring one or more of the motion control operations in the sequence and for each motion control operation, configuring the motion control operation affects the motion control which the operation is operable to perform (page 79, lines 1-11), wherein configuring the parameters of the motion control operations affects the performance of the motion control as shown in the condition statement variables shown.

Referring to claim 12, Compumotor discloses receiving user input to the graphical user interface for configuring one or more of the motion control operations in the sequence does not include receiving user input specifying programming language code to configure the motion control operations (page 79, lines 1-11), wherein configuring includes specifying parameters in a dialog window and does not involve programming language code.

Referring to claim 13, Compumotor discloses for each motion control operation to be configured, displaying a graphical panel including graphical user interface elements for setting one or more properties of the motion control operation and receiving user input to the graphical

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panel to set one or more properties of the motion control operation, as seen on the Figures of page 75.

Referring to claim 15, Compumotor discloses receiving user input requesting to configure a first motion control operation and displaying a graphical panel for configuring the first motion control operation in response to the request (page 75, lines 1-2 and top Figure).

Referring to claim 16, Compumotor discloses that the graphical user interface includes an area which visually represents the motion control operations in the sequence and for each motion control operation added to the sequence, updating the area visually representing the motion control operations in the sequence to illustrate the added motion control operation (page 78, top Figure and lines 5-7).

Referring to claim 17, Compumotor discloses that the area visually representing the motion control operations in the sequence displays a plurality of icons, wherein each icon visually indicates one of the motion control operations in the sequence and updating the area visually representing the motion control operations in the sequence to illustrate the added motion control operation comprises displaying a new icon to visually indicate the added motion control operation (page 74, lines 4-9 and Figures).

Referring to claim 18, Compumotor discloses that the graphical user interface displays a plurality of buttons, wherein each button is operable to add a new motion control operation to the sequence in response to user input and receiving user input to the graphical user interface specifying the sequence of motion control operations comprises receiving user input to the plurality of buttons to create the sequence of motion control operations, as shown by the button panel on the side of the interface shown in the Figure of page 74, wherein it shown that a user

selects one of these buttons to choose a motion control operation that is to be part of the sequence.

Referring to claim 19, Compumotor discloses that the set of motion control operations includes a straight line move operation, an arc move operation and a contoured move operation (page 80, lines 2-8).

Referring to claim 20, Compumotor discloses displaying one or more views of the sequence of motion control operations on the graphical user interface, wherein the one or more views graphically preview the cumulative movement specified by the sequence of motion control operations, as seen on the top Figure of page 87.

Referring to claim 21, Compumotor discloses that the one or more views includes a two-dimensional position view for viewing a two-dimensional display of position data of the sequence in one or more of an XY, YZ, or ZX plane, as seen in the bottom Figure of page 80.

Referring to claim 23, Compumotor discloses automatically generating a graphical program implementing the specified sequence of motion control operations includes programmatically generating a graphical program operable to perform the specified sequence of motion control operations and wherein performing the specified sequence comprises executing the graphical program to perform the specified sequence of motion control operations (page 6, lines 2-6 and page 8, lines 6-8).

Referring to claim 24, Compumotor discloses that the graphical program comprises a plurality of interconnected nodes that visually indicate functionality of the graphical program, as seen on top figure of page 87.

Referring to claim 25, Compumotor discloses that the graphical program comprises a graphical data flow program, as seen on top figure of page 87.

Referring to claim 27, Compumotor discloses receiving a request from a computer program to execute the sequence of motion control operations, wherein the computer program was not used to create the sequence of motion control operations and executing the specified sequence of motion control operations in response to the request (page 90 and 91), wherein the computer program is the controller to which the operations are downloaded for the execution of the specified sequence of motion control operations, wherein the sequence of motion operations were not created in this controller.

Referring to claim 28, Compumotor discloses programmatically converting the sequence of motion control operations to a format usable for configuring an embedded device to perform the sequence of motion control operations and configuring the embedded device to perform the sequence of motion control operations using the format (page 90 and 91), wherein the sequence of operations are created into a code format to be usable in the controller and downloaded into the controller to perform the sequence of motion control operations in code format.

Referring to claim 29, Compumotor discloses a computer-implemented method for creating a motion control sequence (page 2, lines 2-5). Compumotor discloses displaying a graphical user interface that provides graphical user interface access to a set of motion control operations and receiving user input to the graphical user interface specifying the sequence of motion control operations (page 1, lines 2-9). Compumotor discloses automatically generating a graphical program implementing the specified sequence of motion control operations (page 87), wherein it is clear that the sequence of motions created represents a program that is automatically

generated representing the motion functions, the user specifies a sequence but the icons represent functions and other program features such as if-then statement, wherein with user manipulation a graphical program is automatically generated. Compumotor discloses storing information representing the specified sequence of motion control operations in a data structure in response to said receiving user input specifying the sequence of motion control operations (page 6, lines 5-6), wherein the flowchart would represent a data structure.

Referring to claim 31, Compumotor discloses performing the specified sequence of motion control operations (page 91).

Referring to claim 32, Compumotor discloses a computer-implemented method for creating a motion control prototype (page 2, lines 2-5). Compumotor discloses receiving user input specifying a desired sequence of motion control operations (page 1, lines 2-9).

Compumotor discloses recording the specified sequence of motion control operations in a data structure and wherein the specified sequence of motion control operations comprises the motion control prototype; and wherein the motion control prototype is useable to control a motion device (page 2, lines 2-9 and page 69, lines 24-30). Compumotor discloses automatically generating a graphical program implementing the specified sequence of motion control operations (page 87), wherein it is clear that the sequence of motions created represents a program that is automatically generated representing the motion functions, the user specifies a sequence but the icons represent functions and other program features such as if-then statement, wherein with user manipulation a graphical program is automatically generated.

Referring to claim 33, Compumotor discloses performing the specified sequence of motion control operations to control the motion device (page 91, lines 4-5).

Referring to claim 34, Compumotor discloses displaying a set of motion control operations, wherein the user input comprises user input selecting two or more motion control operations from the set of motion control operations, as seen in top figure of page 74.

Referring to claim 38, Compumotor discloses accessing the information representing the sequence of motion control operations to determine program instructions corresponding to motion control operations in the sequence (page 8, lines 2-8 and lines 19-25) and executing the program instructions, wherein performing the specified sequence of motion control operations comprises executing the program instructions (page 91, lines 2-5).

Referring to claim 42, Compumotor discloses a system for creating a motion control sequence (page 2, lines 2-5). Compumotor discloses a processor, a memory storing program instructions, a display device and wherein the processor is operable to execute the program instructions stored in the memory (page 2, lines 2-3 and lines 22-24). Compumotor discloses a computer-implemented method for creating a motion control sequence (page 2, lines 2-5).

Compumotor discloses displaying a graphical user interface that provides graphical user interface access to a set of motion control operations and receiving user input to the graphical user interface specifying the sequence of motion control operations (page 1, lines 2-9).

Compumotor discloses automatically generating a graphical program implementing the specified sequence of motion control operations (page 87), wherein it is clear that the sequence of motions created represents a program that is automatically generated representing the motion functions, the user specifies a sequence but the icons represent functions and other program features such as if-then statement, wherein with user manipulation a graphical program is automatically

generated. Compumotor also discloses performing the specified sequence of motion control operations (page 8, lines 6-8).

Referring to claim 43, Compumotor discloses a motion control device and wherein the program instructions execute the specified sequence of motion control operations comprises the processor executing the specified sequence of motion control operations to control the motion control device (page 91, lines 1-7).

Referring to claim 45, Compumotor discloses compiling the graphical program into executable compiled code (pages 89 and 90).

Referring to claim 46, Compumotor discloses receiving user input specifying a sequence of motion control operations comprises the user selecting at least two motion control icons, and wherein the automatically generated graphical program is distinct from the motion control icons (pages 36 and 37), wherein these icons can be selected by the user during interaction but is distinct from the icons used in the graphical program that is represented.

Referring to claim 47, Compumotor discloses that the automatically generated graphical program is modifiable by a user without the user having to modify the sequence of motion control operations (page 38), wherein the dialog box for a distinct icon allows for user's to modify or manipulate the program without changing the sequence of the icons, wherein manipulation of parameters associated with one icon is possible.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 14 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Compumotor.

Referring to claim 14, Compumotor does not disclose automatically displaying the graphical panel in response to adding the motion control operation to the sequence. It would have been obvious for one skilled in the art at the time of the invention to automatically display the graphical panel in response to adding the motion control. As shown by the example tutorial in Compumotor, the step of adding a motion control operation is most often followed with the step of selecting the dialog window to be displayed, wherein this redundant step can be avoided on a regular basis by simply automatically displaying the graphical panel. Compumotor teaches the main components of the feature by allowing for the addition of motion control operations and the displaying of a graphical panel to configure these operations. In order to provide a user interface with user satisfaction and to avoid redundant steps, it would be obvious to take the features already taught by Compumotor and to make the one step of displaying the panel automatically. Hence, it would have been obvious for one skilled in the art, at the time of the invention to automatically display the graphical panel in response to adding the motion control.

Referring to claim 22, Compumotor does not disclose that the one or more views include a three-dimensional position view for viewing a three-dimensional display of position data of the sequence. It would have been obvious for one skilled in the art at the time of the invention to implement a three-dimensional position view. Compumotor already discloses presenting a two dimensional view, wherein a three-dimensional view would further give a more concise picture of the components displayed. Compumotor has disclosed the main features of motion control

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operation creation and display in two dimensions, wherein it would have been obvious to further this step to a three dimension display in order to give a clearer and more comprehensive view of the data that is to be displayed. Hence, it would have been obvious for one skilled in the art, at the time of the invention to implement a three-dimensional position view.

4. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Compumotor and U. S. Patent No. 6, 097, 887 (Hardikar et al.), herein referred to as Hardikar.

Referring to claim 48, Compumotor discloses automatically generating the graphical program includes generating graphical code comprising a plurality of interconnected nodes without direct user input but does not disclose that the specifying the plurality of interconnected nodes or connections between the nodes is done without direct user input. Hardikar discloses automatically generating a graphical program including generating graphical code comprising a plurality of interconnected nodes without direct user input for specifying the plurality of interconnected nodes or connections between the nodes (Figure 5A and column 6, lines 37-67). It would have been obvious for one skilled in the art at the time of the invention to learn from Hardikar to automatically generate a graphical program including generating graphical code comprising a plurality of interconnected nodes without direct user input for specifying the plurality of interconnected nodes or connections between the nodes. Both Hardikar and Compumotor disclose carrying out functionalities using minimal user interaction, wherein the functionalities are represented by node data. Hardikar and Compumotor are analogous systems that have the same objects of creating node programs, wherein Hardikar allows for easier implementation by allowing users to simply pick parameters wherein the program will then be automatically created. Hence, one skilled in the art would have been motivated to learn from

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Hardikar to automatically generate a graphical program including generating graphical code comprising a plurality of interconnected nodes without direct user input for specifying the plurality of interconnected nodes or connections between the nodes.

Response to Arguments

5. Applicant's arguments filed 7/7/05 have been fully considered but they are not persuasive.

With respect to Applicant's arguments that Compumotor does not disclose automatically generating a graphical program. Compumotor may disclose that user interaction is needed for specifying a sequence of the icon functions, wherein the user merely specifies the sequence but does not create an actual graphical program. The creation of the graphical structure and wherein the structure representing the program, and the generation of the program is done by the back end system, wherein the user does not generate the program, the computer system does by acknowledging the icons sequence layed out by the user.

Conclusion

6. Responses to this action should be submitted as per the options cited below: The United States Patent and Trademark Office (Office) requires most patent related correspondence to be: **a)** faxed to the Central FAX number (571-273-8300) (updated as of July 15, 2005), **b)** hand carried or delivered to the Customer Service Window (located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), **c)** mailed to the mailing address set forth in 37 CFR 1.1 (e.g., P.O. Box 1450, Alexandria, VA 22313-1450), or **d)** transmitted to the Office using the Office's Electronic Filing System. On July 15, 2005, the Central Facsimile (FAX) Number will change from 703-872-9306 to 571-273-8300. Faxes sent to the old number will be routed to the

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new number until September 15, 2005. After September 15, 2005, the old number will no longer be in service and 571-273-8300 will be the only facsimile number recognized for "centralized delivery." The official notice dated June 20, 2005 also includes an "updated list of exceptions to the centralized delivery and facsimile transmission policy for patent related correspondence."

Questions regarding this notice may be e-mailed to PatentPractice@uspto.gov, or directed to the Inventors' Assistance Center by telephone at 800-786-9199, or 571-272-1000. Please label

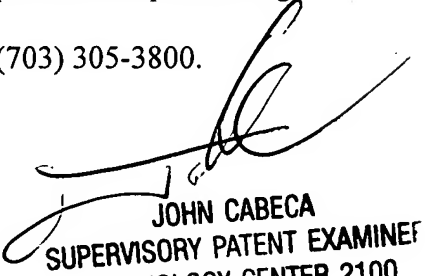
"PROPOSED" or "DRAFT" for informal facsimile communications. For after

final responses, please label "AFTER FINAL" or "EXPEDITED PROCEDURE" on the document. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Namitha Pillai whose telephone number is (571) 272-4054. The examiner can normally be reached on 8:30 AM - 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (571) 272-4048. All Internet e-mail communications will be made of record in the application file.

PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.

Namitha Pillai
Assistant Examiner
Art Unit 2173
February 18, 2004


JOHN CABECA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100